

Additional File 5: Table S1
Downregulated genes in *Prnp*^{ZH3/ZH3} compared to *Prnp*^{+/+}

Gene	Name	padj_Ko vs Wt
Abcb1b	ATP-binding cassette, sub-family B (MDR/TAP), member 1B(Abcb1b)	3,13E-03
Actr2	ARP2 actin-related protein 2(Actr2)	2,71E-04
Adcy9	adenylate cyclase 9(Adcy9)	4,55E-04
Adgrl3	adhesion G protein-coupled receptor L3(Adgrl3)	5,00E-04
Afap1l1	actin filament associated protein 1-like 1(Afap1l1)	1,51E-03
Aff1	AF4/FMR2 family, member 1(Aff1)	4,40E-02
Ago3	argonaute RISC catalytic subunit 3(Ago3)	3,64E-02
Al593442	expressed sequence Al593442(Al593442)	9,02E-03
Aim2	absent in melanoma 2(Aim2)	1,49E-03
Aldh1l2	aldehyde dehydrogenase 1 family, member L2(Aldh1l2)	1,61E-04
Aldh7a1	aldehyde dehydrogenase family 7, member A1(Aldh7a1)	1,02E-04
Ang	angiogenin, ribonuclease, RNase A family, 5(Ang)	1,07E-02
Ank3	ankyrin 3, epithelial(Ank3)	7,57E-03
Anln	anillin, actin binding protein(Anln)	4,66E-02
Ano1	anoctamin 1, calcium activated chloride channel(Ano1)	2,45E-02
Aoc1	amine oxidase, copper-containing 1(Aoc1)	1,61E-02
Ap4b1	adaptor-related protein complex AP-4, beta 1(Ap4b1)	2,54E-02
Argef3	ARFGEF family member 3(Argef3)	1,28E-02
Argap27	Rho GTPase activating protein 27(Arhgap27)	2,37E-02
Arhgef19	Rho guanine nucleotide exchange factor (GEF) 19(Arhgef19)	2,25E-02
Arhgef37	Rho guanine nucleotide exchange factor (GEF) 37(Arhgef37)	2,36E-02
Arsi	arylsulfatase i(Arsi)	3,15E-02
Arsj	arylsulfatase J(Arsj)	1,99E-06
Atf4	activating transcription factor 4(Atf4)	1,85E-06
Atf5	activating transcription factor 5(Atf5)	5,06E-04
Atm	ataxia telangiectasia mutated(Atm)	5,52E-03
Atp2b1	ATPase, Ca++ transporting, plasma membrane 1(Atp2b1)	9,92E-04
Atp5g1	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit C1 (subunit 9)(Atp5g1)	1,08E-07
Atrx	alpha thalassemia/mental retardation syndrome X-linked(Atrx)	1,41E-03
Bach2	BTB and CNC homology, basic leucine zipper transcription factor 2(Bach2)	5,75E-03
Bbs12	Bardet-Biedl syndrome 12 (human)(Bbs12)	2,10E-05
Bclaf1	BCL2-associated transcription factor 1(Bclaf1)	3,73E-05
Bdnf	brain derived neurotrophic factor(Bdnf)	1,01E-07
Best3	bestrophin 3(Best3)	3,27E-03
Bex1	brain expressed X-linked 1(Bex1)	4,41E-04
Bhlhe41	basic helix-loop-helix family, member e41(Bhlhe41)	6,25E-04
Birc6	baculoviral IAP repeat-containing 6(Birc6)	2,16E-02
Birc7	baculoviral IAP repeat-containing 7 (livin)(Birc7)	3,64E-02
Bmpr2	bone morphogenetic protein receptor, type II (serine/threonine kinase)(Bmpr2)	9,38E-03
Bok	BCL2-related ovarian killer(Bok)	5,93E-03
Brwd3	bromodomain and WD repeat domain containing 3(Brwd3)	2,55E-02
Btaf1	B-TFIID TATA-box binding protein associated factor 1(Btaf1)	7,67E-06
C1ql2	complement component 1, q subcomponent-like 2(C1ql2)	4,41E-02
C2cd4a	C2 calcium-dependent domain containing 4A(C2cd4a)	2,62E-02
Cacna1e	calcium channel, voltage-dependent, R type, alpha 1E subunit(Cacna1e)	2,13E-02
Cacnb4	calcium channel, voltage-dependent, beta 4 subunit(Cacnb4)	1,07E-02
Cacng5	calcium channel, voltage-dependent, gamma subunit 5(Cacng5)	2,19E-02
Cacul1	CDK2 associated, cullin domain 1(Cacul1)	2,55E-03
Camp	cathelicidin antimicrobial peptide(Camp)	4,17E-02
Caps2	calycophosphine 2(Caps2)	8,80E-03
Capza1	capping protein (actin filament) muscle Z-line, alpha 1(Capza1)	1,41E-03
Car9	carbonic anhydrase 9(Car9)	2,05E-03
Card6	caspase recruitment domain family, member 6(Card6)	1,29E-02
Cars	cysteinyl-tRNA synthetase(Cars)	3,87E-08
Cast	calpastatin(Cast)	4,76E-02
Cdh26	cadherin-like 26(Cdh26)	1,54E-02
Cdh8	cadherin 8(Cdh8)	3,50E-03
Cdhr4	cadherin-related family member 4(Cdhr4)	1,37E-02
Cfap157	cilia and flagella associated protein 157(Cfap157)	4,37E-02
Cgn	cingulin(Cgn)	4,14E-02
Chac1	ChaC, cation transport regulator 1(Chac1)	1,37E-06
Chaf1a	chromatin assembly factor 1, subunit A (p150)(Chaf1a)	4,67E-02
Chl1	cell adhesion molecule L1-like(Chl1)	1,80E-04
Chrna1	cholinergic receptor, nicotinic, alpha polypeptide 1 (muscle)(Chrna1)	4,38E-02
Chst9	carbohydrate (N-acetylgalactosamine 4-0) sulfotransferase 9(Chst9)	2,01E-04
Ciart	circadian associated repressor of transcription(Ciart)	1,13E-02
Cistn2	calsyntenin 2(Cistn2)	1,72E-04
Cntn3	contactin 3(Cntn3)	4,66E-03
Cort	cortistatin(Cort)	1,80E-04
Cpeb4	cytoplasmic polyadenylation element binding protein 4(Cpeb4)	1,96E-03
Crhbp	corticotropin releasing hormone binding protein(Crhbp)	9,83E-03
Csmd3	CUB and Sushi multiple domains 3(Csmd3)	3,82E-02
Cxcl5	chemokine (C-X-C motif) ligand 5(Cxcl5)	7,17E-03
D130040H23Rik	RIKEN cDNA D130040H23 gene(D130040H23Rik)	4,62E-02

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Dap3	death associated protein 3(Dap3)	3,10E-04
Dbf4	DBF4 zinc finger(DBf4)	1,82E-02
Dbh	dopamine beta hydroxylase(DBh)	4,18E-02
Defb42	defensin beta 42(Defb42)	1,70E-02
Dennd2c	DENN/MADD domain containing 2C(Dennd2c)	3,55E-02
Dgkh	diacylglycerol kinase, eta(Dgkh)	2,54E-04
Dgki	diacylglycerol kinase, iota(Dgki)	1,09E-03
Dhx33	DEAH (Asp-Glu-Ala-His) box polypeptide 33(Dhx33)	1,16E-04
Dnah9	dynein, axonemal, heavy chain 9(Dnah9)	8,65E-04
Dnajb14	DnaJ heat shock protein family (Hsp40) member B14(Dnajb14)	8,00E-03
Dock10	dedicator of cytokinesis 10(Dock10)	3,85E-02
Dock4	dedicator of cytokinesis 4(Dock4)	1,90E-03
Drd5	dopamine receptor D5(Drd5)	2,19E-02
Drossha	drosha, ribonuclease type III(Drossha)	5,56E-03
Dsel	dermatan sulfate epimerase-like(Dsel)	5,34E-04
Dthd1	death domain containing 1(Dthd1)	9,87E-03
Duox2	dual oxidase 2(Duox2)	1,50E-04
Eda2r	ectodysplasin A2 receptor(Eda2r)	2,42E-02
Eno1	enolase 1, alpha non-neuron(Eno1)	6,22E-03
Eomes	eomesodermin(Eomes)	2,45E-02
Epha6	Eph receptor A6(Epha6)	1,85E-04
Epm2aip1	EPM2A (laforin) interacting protein 1(Epm2aip1)	5,71E-03
Eps8l1	EPS8-like 1(Eps8l1)	9,80E-03
Epx	eosinophil peroxidase(Epx)	8,84E-03
Etaa1	Ewing tumor-associated antigen 1(Etaa1)	4,94E-03
Exosc9	exosome component 9(Exosc9)	2,80E-04
Farp1	FERM, RhoGEF (Arhgef) and pleckstrin domain protein 1 (chondrocyte-derived)(Farp1)	4,75E-04
Fgfbp3	fibroblast growth factor binding protein 3(Fgfbp3)	1,31E-04
Filip1	filamin A interacting protein 1(Filip1)	3,22E-03
Fkbp10	FK506 binding protein 10(Fkbp10)	9,60E-04
Fnip1	folliculin interacting protein 1(Fnip1)	2,16E-04
Foxk1	forkhead box K1(Foxk1)	9,17E-05
Frmpd2	FERM and PDZ domain containing 2(Frmpd2)	9,24E-03
Frrs1l	ferric-chelate reductase 1 like(Frrs1l)	4,36E-04
Fry	FRY microtubule binding protein(Fry)	1,39E-04
Fstl4	folistatin-like 4(Fstl4)	3,43E-04
Fzd3	frizzled class receptor 3(Fzd3)	3,44E-02
Gabrr2	gamma-aminobutyric acid (GABA) C receptor, subunit rho 2(Gabrr2)	4,91E-03
Garem1	GRB2 associated regulator of MAPK1 subtype 1(Garem1)	2,54E-06
Gbe1	glucan (1,4-alpha-), branching enzyme 1(Gbe1)	4,88E-02
Gdf9	growth differentiation factor 9(Gdf9)	6,70E-03
Gemin6	gem (nuclear organelle) associated protein 6(Gemin6)	8,98E-03
Gfra2	glial cell line derived neurotrophic factor family receptor alpha 2(Gfra2)	2,69E-02
Ggps1	geranylgeranyl diphosphate synthase 1(Ggps1)	1,88E-03
Gipr	gastric inhibitory polypeptide receptor(Gipr)	1,15E-06
Glis3	GLIS family zinc finger 3(Glis3)	3,45E-02
Glp2r	glucagon-like peptide 2 receptor(Glp2r)	2,58E-02
Gnpda1	glucosamine-6-phosphate deaminase 1(Gnpda1)	2,98E-05
Gpc4	glycan 4(Gpc4)	5,02E-03
Gpr150	G protein-coupled receptor 150(Gpr150)	1,62E-02
Gpr151	G protein-coupled receptor 151(Gpr151)	2,76E-02
Gpr21	G protein-coupled receptor 21(Gpr21)	1,90E-02
Gpr22	G protein-coupled receptor 22(Gpr22)	2,77E-02
Grin2a	glutamate receptor, ionotropic, NMDA2A (epsilon 1)(Grin2a)	7,81E-03
Grin2b	glutamate receptor, ionotropic, NMDA2B (epsilon 2)(Grin2b)	5,96E-05
Gtpbp10	GTP-binding protein 10 (putative)(Gtpbp10)	1,11E-04
Gucy1a2	guanylate cyclase 1, soluble, alpha 2(Gucy1a2)	2,12E-03
Gucy2g	guanylate cyclase 2g(Gucy2g)	3,87E-03
Hcn1	hyperpolarization-activated, cyclic nucleotide-gated K+ 1(Hcn1)	1,70E-02
Hdac1	histone deacetylase 1(Hdac1)	1,70E-03
Hectd2	HECT domain containing 2(Hectd2)	2,05E-04
Hecw2	HECT, C2 and WW domain containing E3 ubiquitin protein ligase 2(Hecw2)	4,59E-03
Henmt1	HEN1 methyltransferase homolog 1 (Arabidopsis)(Henmt1)	8,18E-03
Herc2	HECT and RLD domain containing E3 ubiquitin protein ligase 2(Herc2)	7,55E-03
Hfe	hemochromatosis(Hfe)	3,41E-02
Hfm1	HFM1, ATP-dependent DNA helicase homolog(Hfm1)	7,18E-05
Hjurp	Holliday junction recognition protein(Hjurp)	5,99E-05
Hk2	hexokinase 2(Hk2)	7,85E-03
Hmgn2	high mobility group nucleosomal binding domain 2(Hmgn2)	2,75E-03
Hndl	4-hydroxyphenylpyruvate dioxygenase-like(Hndl)	3,81E-02
Hspb6	heat shock protein, alpha-crystallin-related, B6(Hspb6)	5,71E-03
Htr5b	5-hydroxytryptamine (serotonin) receptor 5B(Htr5b)	1,43E-02
Hunk	hormonally upregulated Neu-associated kinase(Hunk)	1,17E-02
Iars2	isoleucine-tRNA synthetase 2, mitochondrial(Iars2)	7,82E-06
Ide	insulin degrading enzyme(Ide)	3,91E-09
Idua	iduronidase, alpha-L-(Idua)	2,12E-03
Igfbp1	insulin-like growth factor binding protein-like 1(Igfbp1)	4,39E-02
Igtp	interferon gamma induced GTPase(Igtp)	3,55E-02
Il1rap	interleukin 1 receptor accessory protein(Il1rap)	1,15E-02

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Ildr2	immunoglobulin-like domain containing receptor 2(Ildr2)	8,67E-03
Inhba	inhibin beta-A(Inhba)	4,55E-02
Ints7	integrator complex subunit 7(Ints7)	1,81E-09
Irgm2	immunity-related GTPase family M member 2(Irgm2)	3,15E-02
Itpka	inositol 1,4,5-trisphosphate 3-kinase A(Itpka)	3,91E-02
Izumo4	IZUMO family member 4(Izumo4)	4,17E-02
Kansl1I	KAT8 regulatory NSL complex subunit 1-like(Kansl1I)	3,30E-03
Kcn1	potassium voltage-gated channel, shaker-related subfamily, member 1(Kcn1)	7,51E-07
Kcn4	potassium voltage-gated channel, shaker-related subfamily, member 4(Kcn4)	4,41E-02
Kcnb2	potassium voltage gated channel, Shab-related subfamily, member 2(Kcnb2)	7,68E-04
Kcnh5	potassium voltage-gated channel, subfamily H (eag-related), member 5(Kcnh5)	1,02E-02
Kcnh7	potassium voltage-gated channel, subfamily H (eag-related), member 7(Kcnh7)	1,44E-02
Kcnj2	potassium inwardly-rectifying channel, subfamily J, member 2(Kcnj2)	3,05E-03
Kcnj6	potassium inwardly-rectifying channel, subfamily J, member 6(Kcnj6)	7,00E-05
Kcnq3	potassium voltage-gated channel, subfamily Q, member 3(Kcnq3)	5,24E-03
Kcns1	K+ voltage-gated channel, subfamily S, 1(Kcns1)	2,25E-02
Kctd16	potassium channel tetramerisation domain containing 16(Kctd16)	3,49E-03
Kctd4	potassium channel tetramerisation domain containing 4(Kctd4)	2,37E-02
Khdrbs1	KH domain containing, RNA binding, signal transduction associated 1(Khdrbs1)	6,55E-06
Klh40	kelch-like 40(Klh40)	4,26E-02
Krt12	keratin 12(Krt12)	4,76E-05
Krt222	keratin 222(Krt222)	6,70E-04
Krt9	keratin 9(Krt9)	1,76E-08
Lactb2	lactamase, beta 2(Lactb2)	6,41E-03
Lamc2	laminin, gamma 2(Lamc2)	3,94E-02
Lats2	large tumor suppressor 2(Lats2)	3,36E-02
Lca5	Leber congenital amaurosis 5 (human)(Lca5)	1,97E-03
Lcp1	lymphocyte cytosolic protein 1(Lcp1)	8,36E-04
Lefty1	left right determination factor 1(Lefty1)	5,71E-10
Lefty2	left-right determination factor 2(Lefty2)	1,02E-02
Lmbrd2	LMBR1 domain containing 2(Lmbrd2)	3,85E-03
Lnpep	leucyl/cystinyl aminopeptidase(Lnpep)	1,63E-02
Lpar6	lysophosphatidic acid receptor 6(Lpar6)	2,76E-03
Lrp2	low density lipoprotein receptor-related protein 2(Lrp2)	1,28E-02
Lrrc46	leucine rich repeat containing 46(Lrrc46)	4,29E-02
Lrrtm4	leucine rich repeat transmembrane neuronal 4(Lrrtm4)	3,09E-04
Ltf	lactotransferrin(Ltf)	3,72E-02
Lyrm7	LYR motif containing 7(Lyrm7)	5,28E-12
Lysmd1	LysM, putative peptidoglycan-binding, domain containing 1(Lysmd1)	1,84E-02
Lyst	lysosomal trafficking regulator(Lyst)	3,17E-02
Man1a	mannosidase 1, alpha(Man1a)	9,92E-05
Manba	mannosidase, beta A, lysosomal(Manba)	4,74E-08
Map1b	microtubule-associated protein 1B(Map1b)	1,03E-02
Mars2	methionine-tRNA synthetase 2 (mitochondrial)(Mars2)	1,24E-03
Mast4	microtubule associated serine/threonine kinase family member 4(Mast4)	2,89E-02
Mcm2	minichromosome maintenance complex component 2(Mcm2)	1,98E-02
Mcm3	minichromosome maintenance complex component 3(Mcm3)	3,84E-02
Mcm5	minichromosome maintenance complex component 5(Mcm5)	9,38E-03
Med13	mediator complex subunit 13(Med13)	3,45E-02
Megf6	multiple EGF-like-domains 6(Megf6)	2,58E-02
Met	met proto-oncogene(Met)	3,48E-02
Mex3b	mex3 RNA binding family member B(Mex3b)	3,55E-02
Mfn2	mitofusin 2(Mfn2)	1,57E-06
Micu2	mitochondrial calcium uptake 2(Micu2)	7,18E-04
Mob1b	MOB kinase activator 1B(Mob1b)	2,45E-02
Mplkip	M-phase specific PLK1 intereacting protein(Mplkip)	4,20E-02
Mthfd2	methylenetetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate cyclohydrolase(Mthfd2)	6,61E-06
Mtus2	microtubule associated tumor suppressor candidate 2(Mtus2)	1,49E-02
Musk	muscle, skeletal, receptor tyrosine kinase(Musk)	3,02E-06
Myb	myeloblastosis oncogene(Myb)	3,99E-02
Mylk3	myosin light chain kinase 3(Mylk3)	6,22E-03
Myt1l	myelin transcription factor 1-like(Myt1l)	7,64E-05
Mzt1	mitotic spindle organizing protein 1(Mzt1)	1,30E-03
Nars	asparaginyl-tRNA synthetase(Nars)	1,78E-08
Ncapd2	non-SMC condensin I complex, subunit D2(Ncapd2)	1,73E-02
Ncf2	neutrophil cytosolic factor 2(Ncf2)	7,67E-04
Ndst4	N-deacetylase/N-sulfotransferase (heparin glucosaminyl) 4(Ndst4)	4,37E-03
Nek10	NIMA (never in mitosis gene a)- related kinase 10(Nek10)	1,44E-02
Nf1	neurofibromatosis 1(Nf1)	1,71E-04
Nfe2l3	nuclear factor, erythroid derived 2, like 3(Nfe2l3)	2,25E-02
Ngp	neutrophilic granule protein(Ngp)	4,41E-02
Nhs12	NHS-like 2(Nhs12)	3,28E-02
Nkain3	Na+/K+ transporting ATPase interacting 3(Nkain3)	3,77E-02
Nodal	nodal(Nodal)	3,03E-02
Nos1ap	nitric oxide synthase 1 (neuronal) adaptor protein(Nos1ap)	1,20E-05
Notch1	notch 1(Notch1)	1,90E-03
Npy2r	neuropeptide Y receptor Y2(Npy2r)	1,35E-05
Nr1d1	nuclear receptor subfamily 1, group D, member 1(Nr1d1)	3,69E-02
Nr1h4	nuclear receptor subfamily 1, group H, member 4(Nr1h4)	1,21E-02

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Nr3c2	nuclear receptor subfamily 3, group C, member 2(Nr3c2)	3,68E-02
Nrip1	nuclear receptor interacting protein 1(Nrip1)	3,50E-03
Nrxn1	neurexin I(Nrxn1)	9,65E-03
Nt5c1a	5'-nucleotidase, cytosolic IA(Nt5c1a)	3,10E-04
Ntrk3	neurotrophic tyrosine kinase, receptor, type 3(Ntrk3)	7,33E-03
Nudcd1	NudC domain containing 1(Nudcd1)	2,64E-02
Nudt15	nudix (nucleoside diphosphate linked moiety X)-type motif 15(Nudt15)	1,41E-02
Nudt6	nudix (nucleoside diphosphate linked moiety X)-type motif 6(Nudt6)	2,96E-02
Nup93	nucleoporin 93(Nup93)	1,87E-03
Nvl	nuclear VCP-like(Nvl)	1,78E-07
Nyap2	neuronal tyrosine-phosphorylated phosphoinositide 3-kinase adaptor 2(Nyap2)	3,32E-03
Ogg1	8-oxoguanine DNA-glycosylase 1(Ogg1)	1,25E-02
Olfm4	olfactomedin 4(Olfm4)	2,13E-03
Olfm13	olfactomedin-like 3(Olfm13)	2,08E-04
Olfr316	olfactory receptor 316(Olfr316)	1,63E-05
Olfr317	olfactory receptor 317(Olfr317)	1,47E-02
Osgep	O-sialoglycoprotein endopeptidase(Osgep)	3,50E-03
Palmd	palmelphin(Palmd)	2,54E-04
Paqr8	progesterin and adipoQ receptor family member VIII(Paqr8)	1,41E-05
Parp1	poly (ADP-ribose) polymerase family, member 1(Parp1)	1,67E-04
Pcdh17	protocadherin 17(Pcdh17)	1,69E-08
Pcdh9	protocadherin 9(Pcdh9)	1,87E-04
Pcdhb12	protocadherin beta 12(Pcdhb12)	6,27E-06
Pcdhb15	protocadherin beta 15(Pcdhb15)	2,18E-05
Pcdhb16	protocadherin beta 16(Pcdhb16)	4,60E-04
Pcdhb17	protocadherin beta 17(Pcdhb17)	7,96E-04
Pcdhb18	protocadherin beta 18(Pcdhb18)	2,87E-03
Pcdhb19	protocadherin beta 19(Pcdhb19)	4,22E-03
Pcdhb9	protocadherin beta 9(Pcdhb9)	4,74E-08
Pcdhga10	protocadherin gamma subfamily A, 10(Pcdhga10)	1,06E-03
Pcdhga11	protocadherin gamma subfamily A, 11(Pcdhga11)	7,85E-07
Pcdhga3	protocadherin gamma subfamily A, 3(Pcdhga3)	3,18E-03
Pcdhga8	protocadherin gamma subfamily A, 8(Pcdhga8)	9,67E-04
Pcdhga9	protocadherin gamma subfamily A, 9(Pcdhga9)	9,89E-07
Pcdhgb1	protocadherin gamma subfamily B, 1(Pcdhgb1)	2,27E-02
Pctp	phosphatidylcholine transfer protein(Pctp)	1,09E-03
Pde6h	phosphodiesterase 6H, cGMP-specific, cone, gamma(Pde6h)	4,80E-04
Pdf	peptide deformylase (mitochondrial)(Pdf)	3,95E-02
Pdp2	pyruvate dehydrogenase phosphatase catalytic subunit 2(Pdp2)	9,48E-03
Pex5l	peroxisomal biogenesis factor 5-like(Pex5l)	7,00E-04
Pi15	peptidase inhibitor 15(Pi15)	1,14E-02
Pigw	phosphatidylinositol glycan anchor biosynthesis, class W(Pigw)	4,89E-02
Pkd2	polycystic kidney disease 2(Pkd2)	9,37E-05
Pkd2l2	polycystic kidney disease 2-like 2(Pkd2l2)	4,27E-03
Pkdrej	polycystin (PKD) family receptor for egg jelly(Pkdrej)	1,49E-02
Pm20d2	peptidase M20 domain containing 2(Pm20d2)	1,97E-03
Pop1	processing of precursor 1, ribonuclease P/MRP family, (S. cerevisiae)(Pop1)	7,94E-04
Ppm1e	protein phosphatase 1E (PP2C domain containing)(Ppm1e)	1,63E-03
Ppp1r3e	protein phosphatase 1, regulatory (inhibitor) subunit 3E(Ppp1r3e)	8,07E-08
Prdm16	PR domain containing 16(Prdm16)	2,04E-03
Prickle2	prickle planar cell polarity protein 2(Prickle2)	4,01E-04
Prnp	prion protein(Prnp)	8,64E-07
Prox1	prospero homeobox 1(Prox1)	5,80E-03
Psmb5	proteasome (prosome, macropain) subunit, beta type 5(Psmb5)	4,98E-04
Ptchd1	patched domain containing 1(Ptchd1)	3,27E-02
Ptchd4	patched domain containing 4(Ptchd4)	1,58E-04
Ptg52	prostaglandin-endoperoxide synthase 2(Ptg52)	2,91E-09
Ptpri	protein tyrosine phosphatase, receptor type, J(Ptpri)	4,33E-05
Pttg1	pituitary tumor-transforming gene 1(Pttg1)	1,45E-02
Pura	purine rich element binding protein A(Pura)	8,60E-03
Rad1	RAD1 checkpoint DNA exonuclease(Rad1)	9,77E-03
Rad51ap2	RAD51 associated protein 2(Rad51ap2)	1,07E-02
Rasal2	RAS protein activator like 2(Rasal2)	1,76E-06
Rbm8a	RNA binding motif protein 8a(Rbm8a)	1,95E-02
Rc3h1	RING CCCH (C3H) domains 1(Rc3h1)	2,45E-02
Rc3h2	ring finger and CCCH-type zinc finger domains 2(Rc3h2)	1,08E-02
Retnlg	resistin like gamma(Retnlg)	2,84E-02
Rev3l	REV3 like, DNA directed polymerase zeta catalytic subunit(Rev3l)	6,26E-05
Riiad1	regulatory subunit of type II PKA R-subunit (RIIa) domain containing 1(Riiad1)	2,05E-03
Rimbp3	RIMS binding protein 3(Rimbp3)	3,89E-03
Ror1	receptor tyrosine kinase-like orphan receptor 1(Ror1)	1,72E-03
Rorc	RAR-related orphan receptor gamma(Rorc)	1,36E-05
Rpl26	ribosomal protein L26(Rpl26)	7,63E-50
Rpl34	ribosomal protein L34(Rpl34)	6,91E-71
Rpl5	ribosomal protein L5(Rpl5)	4,18E-08
Rps19	ribosomal protein S19(Rps19)	3,20E-02
Rsg1	REM2 and RAB-like small GTPase 1(Rsg1)	2,41E-02
Rsl1	regulator of sex limited protein 1(Rsl1)	7,44E-03
S1pr5	sphingosine-1-phosphate receptor 5(S1pr5)	4,54E-02

Additional File 5: Table S1

Samd3	sterile alpha motif domain containing 3(Samd3)	1,06E-02
Samd5	sterile alpha motif domain containing 5(Samd5)	4,90E-02
Scai	suppressor of cancer cell invasion(Scai)	4,90E-02
Scn3a	sodium channel, voltage-gated, type III, alpha(Scn3a)	2,32E-05
Scnm1	sodium channel modifier 1(Scnm1)	3,18E-06
Scoc	short coiled-coil protein(Scoc)	4,06E-02
Sec24d	Sec24 related gene family, member D (<i>S. cerevisiae</i>)(Sec24d)	5,47E-13
Sema3e	sema domain, immunoglobulin domain (Ig), short basic domain, secreted, (semaphorin) 3E(Sema3e)	4,90E-03
Sema5a	sema domain, seven thrombospondin repeats (type 1 and type 1-like), semaphorin 5A	2,84E-02
Shroom4	shroom family member 4(Shroom4)	9,40E-03
Siglece	sialic acid binding Ig-like lectin E(Siglece)	5,18E-03
Sil1	endoplasmic reticulum chaperone SIL1 homolog (<i>S. cerevisiae</i>)(Sil1)	7,81E-03
Skil	SKI-like(Skil)	2,79E-04
Slc1a5	solute carrier family 1 (neutral amino acid transporter), member 5(Slc1a5)	3,63E-02
Slc22a15	solute carrier family 22 (organic anion/cation transporter), member 15(Slc22a15)	1,94E-04
Slc2a13	solute carrier family 2 (facilitated glucose transporter), member 13(Slc2a13)	3,46E-03
Slc35a5	solute carrier family 35, member A5(Slc35a5)	1,85E-06
Slc6a19	solute carrier family 6 (neurotransmitter transporter), member 19(Slc6a19)	3,64E-02
Slc7a1	solute carrier family 7 (cationic amino acid transporter, y+ system), member 1(Slc7a1)	5,99E-05
Slc7a5	solute carrier family 7 (cationic amino acid transporter, y+ system), member 5(Slc7a5)	1,36E-05
Slc8a1	solute carrier family 8 (sodium/calcium exchanger), member 1(Slc8a1)	1,01E-06
Slitrk4	SLT and NTRK-like family, member 4(Slitrk4)	2,62E-03
Snrdp1	small nuclear ribonucleoprotein D1(Snrdp1)	1,67E-06
Sntn	sentan, cilia apical structure protein(Sntn)	4,04E-02
Sorcs3	sortilin-related VPS10 domain containing receptor 3(Sorcs3)	3,05E-03
Sorl1	sortilin-related receptor, LDLR class A repeats-containing(Sorl1)	6,13E-04
Sox9	SRY (sex determining region Y)-box 9(Sox9)	3,94E-03
Sp8	trans-acting transcription factor 8(Sp8)	4,40E-02
Srl	sarcalumenin(Srl)	9,74E-03
Srp9	signal recognition particle 9(Srp9)	1,05E-19
St8sia1	ST8 alpha-N-acetyl-neuraminate alpha-2,8-sialyltransferase 1(St8sia1)	3,77E-04
Stab1	stabilin 1(Stab1)	3,01E-03
Stac	src homology three (SH3) and cysteine rich domain(Stac)	2,30E-02
Stat5a	signal transducer and activator of transcription 5A(Stat5a)	5,71E-03
Stk26	serine/threonine kinase 26(Stk26)	4,37E-02
Stpg1	sperm tail PG rich repeat containing 1(Stpg1)	1,06E-02
Stxbp5l	syntaxin binding protein 5-like(Stxbp5l)	3,17E-04
Sult1c1	sulfotransferase family, cytosolic, 1C, member 1(Sult1c1)	5,34E-03
Syn3	synapsin III(Syn3)	5,59E-06
Syncrip	synaptotagmin binding, cytoplasmic RNA interacting protein(Syncrip)	4,41E-02
Syne1	spectrin repeat containing, nuclear envelope 1(Syne1)	2,05E-02
Syne2	spectrin repeat containing, nuclear envelope 2(Syne2)	1,34E-02
Tanc1	tetratricopeptide repeat, ankyrin repeat and coiled-coil containing 1(Tanc1)	3,12E-03
Tbc1d8b	TBC1 domain family, member 8B(Tbc1d8b)	3,63E-02
Tchh	trichohyalin(Tchh)	4,34E-02
Tdg	thymine DNA glycosylase(Tdg)	1,15E-04
Tecta	tectorin alpha(Tecta)	2,23E-02
Tenm1	teneurin transmembrane protein 1(Tenm1)	1,93E-02
Tenm3	teneurin transmembrane protein 3(Tenm3)	1,63E-02
Them4	thioesterase superfamily member 4(Them4)	2,02E-03
Thoc2	THO complex 2(Thoc2)	4,85E-03
Thrsp	thyroid hormone responsive(Thrsp)	1,08E-02
Tll1	tolloid-like(Tll1)	2,37E-03
Tmem182	transmembrane protein 182(Tmem182)	2,34E-02
Tmem245	transmembrane protein 245(Tmem245)	3,63E-02
Tmem260	transmembrane protein 260(Tmem260)	5,06E-04
Trib3	tribbles pseudokinase 3(Trib3)	2,15E-02
Trim17	tripartite motif-containing 17(Trim17)	1,07E-03
Trim2	tripartite motif-containing 2(Trim2)	2,79E-05
Trpc4	transient receptor potential cation channel, subfamily C, member 4(Trpc4)	1,71E-02
Trpc5	transient receptor potential cation channel, subfamily C, member 5(Trpc5)	6,11E-04
Trrap	transformation/transcription domain-associated protein(Trap)	8,34E-03
Ttc30b	tetratricopeptide repeat domain 30B(Ttc30b)	1,18E-02
Ttf2	transcription termination factor, RNA polymerase II(Ttf2)	9,94E-12
Ttn	titin(Ttn)	7,74E-03
Uba1y	ubiquitin-activating enzyme, Chr Y(Uba1y)	2,21E-02
Ubxn10	UBX domain protein 10(Ubxn10)	2,84E-02
Uhrf1bp1l	UHRF1 (ICBP90) binding protein 1-like(Uhrf1bp1l)	3,80E-05
Usp1	ubiquitin specific peptidase 1(Usp1)	1,72E-04
Usp2	ubiquitin specific peptidase 2(Usp2)	5,70E-03
Usp29	ubiquitin specific peptidase 29(Usp29)	1,53E-02
Usp34	ubiquitin specific peptidase 34(Usp34)	7,00E-06
Usp53	ubiquitin specific peptidase 53(Usp53)	1,82E-04
Vps13c	vacuolar protein sorting 13C(Vps13c)	1,52E-02
Vps50	VPS50 EARP/GARPII complex subunit(Vps50)	2,06E-06
Vwa3b	von Willebrand factor A domain containing 3B(Vwa3b)	7,10E-03
Wdhd1	WD repeat and HMG-box DNA binding protein 1(Wdhd1)	2,51E-07
Wipf3	WAS/WASL interacting protein family, member 3(Wipf3)	3,59E-02
Xrn1	5'-3' exoribonuclease 1(Xrn1)	6,22E-05